



Face milling cutter

**DOPENT**

Tungaloy Report No. 372S2-G

## Neutral inserts for non-ferrous applications



## Neutral inserts for non-ferrous applications for both right and left hand uses

### ■ Applicable to a wide range of applications

Neutral inserts can be used for duplex milling of plates and blocks.

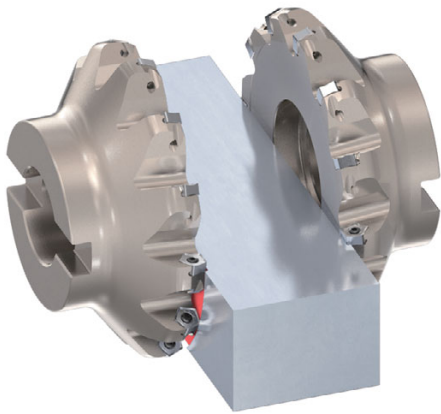


Image of duplex milling applications



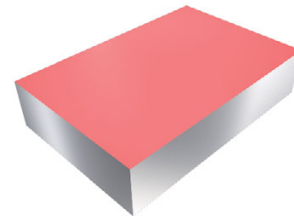
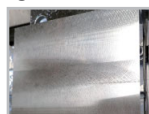
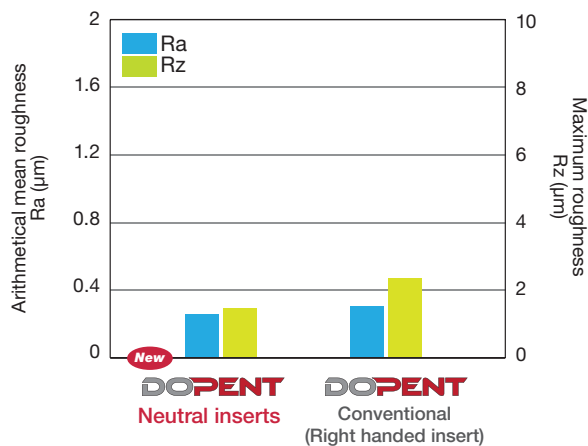
**New**

Neutral insert

**PNCU\*\*GNFN-AJ**

### ■ Cutting performance

#### ■ Surface quality



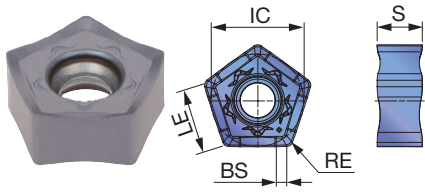
**N**

Cutter : TEN09R125M38.1-10 (DC =  $\phi$ 125 mm, CICT = 10)  
 Insert : PNCU0905GNFN-AJ KS05F  
 PNCU0905GNFR-AJ TH10 (Conventional)  
 Workpiece material : A7075 / AlZn5.5MgCu  
 Cutting speed :  $V_c = 250$  m/min  
 Feed per revolution :  $f_z = 0.1$  mm/t  
 Depth of cut :  $a_p = 0.6$  mm  
 Width of cut :  $a_e = 80$  mm  
 Coolant : Wet

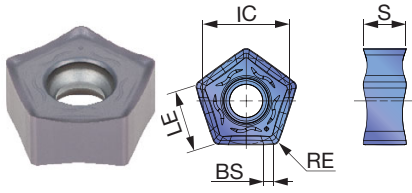
**Neutral inserts provide excellent surface finishing quality that is equivalent to the conventional right hand inserts.**

# INSERT

PN\*U0905GNEN-MJ (Neutral hand)

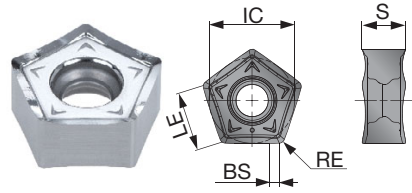


PNCU0905GNEN-ML (Neutral hand)

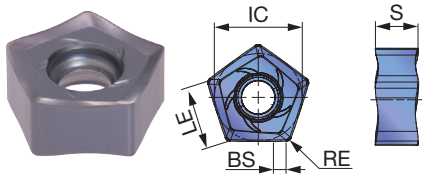


New

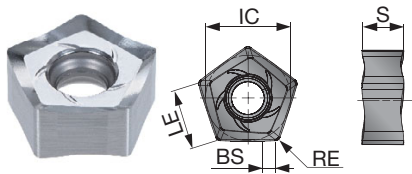
PNCU0905GNFN-AJ (Neutral hand)



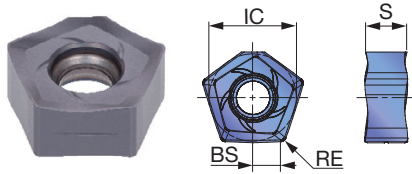
PNCU0905GNER-MJ (Right hand)



PNCU0905GNFR-AJ (Right hand)



PNCU0905GNER-W (Right hand)



<b>P</b> Steel	★	☆	★	☆	★	☆	☆	★					
<b>M</b> Stainless			★	☆	☆	☆	☆						
<b>K</b> Cast iron		☆		★	☆	★							
<b>N</b> Non-ferrous									★	☆			
<b>S</b> Superalloys		★	☆	☆	★								
<b>H</b> Hard materials		★											

★ : First choice  
☆ : Second choice

Designation	RE	APMX	Coated							Cermets		Uncoated		LE	S	IC	BS		
			AH3225	AH8015	AH3135	AH120	AH725	T1215	T3225	T3130	NS740	KS05F	TH10						
PNMU0905GNEN-MJ	0.8	6.4	●	●	●	●			●							8.9	6	12.2	1.4
PNCU0905GNEN-MJ	0.8	6.4	●	●	●	●			●							8.9	6	12.2	1.4
PNCU0905GNER-MJ	0.8	6.4								●						8.9	5.93	12.2	1.4
PNCU0905GNEN-ML	0.8	6.4	●	●	●											8.9	5.96	12.2	1.4
New PNCU0905GNFN-AJ	0.8	6.4									●					8.9	6.16	12.2	1.4
PNCU0905GNFR-AJ	0.8	6.4										●				8.9	6.25	12.2	1.4
PNCU0905GNER-W	0.8	2					●									-	5.93	12.2	3.8

● : New product  
● : Line up

## STANDARD CUTTING CONDITIONS

ISO	Workpiece materials	Selection criteria	Recommended grade	Chip-breaker	Cutting speed Vc (m/min)	Feed per tooth fz (mm/t)
<b>N</b>	Aluminium alloys Si < 13%	First choice	KS05F	AJ	500 - 1500	0.1 - 0.5
	Aluminium alloys Si ≥ 13%	First choice	KS05F	AJ	150 - 500	0.1 - 0.5

- Remove excessive chips with an air blast to prevent chip jamming.
- Use water-soluble coolant to avoid built-up edge in case extreme welding occurs on cutting edges. (ex. aluminium machining).
- For operations with a varied depth of cut (ex. casting skin) and machining of workpiece materials with interrupted surface, the feed (fz) should be set to the lower recommended value shown in the above table.

- Cutting conditions may be limited depending on machine power, workpiece rigidity, and spindle output. When the cutting width, depth or overhang length is large, set Vc and fz to the lower recommended values and check the machine power and vibration.

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